SONY

4-246-169-**13**(2)

Micro Hi-Fi Component System

Operating Instructions

Owner's Record

The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. Serial No.

COMPACT disc DIGITAL AUDIO

CMT-EP515
CMT-EP414

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WARNING

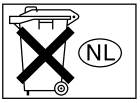
To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To prevent fire, do not cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

This appliance is classified as a CLASS 1 LASER product. This label is located on the rear exterior.

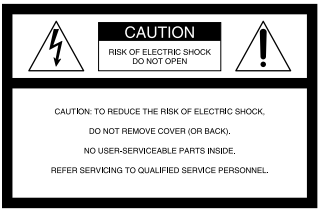


Don't throw away the battery with general house waste, dispose of it correctly as chemical waste.

Except for European model

ENERGY STAR® is a U.S. registered mark. As an ENERGY STAR® partner, Sony Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

NOTICE FOR THE CUSTOMERS IN THE U.S.A.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

CAUTION

The use of optical instruments with this product will increase eye hazard.

WARNING

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

NOTICE FOR THE CUSTOMERS IN CANADA

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

How to use this manual

This manual mainly explains operations using the remote, but the same operations can also be performed using the buttons on the system having the same or similar names.

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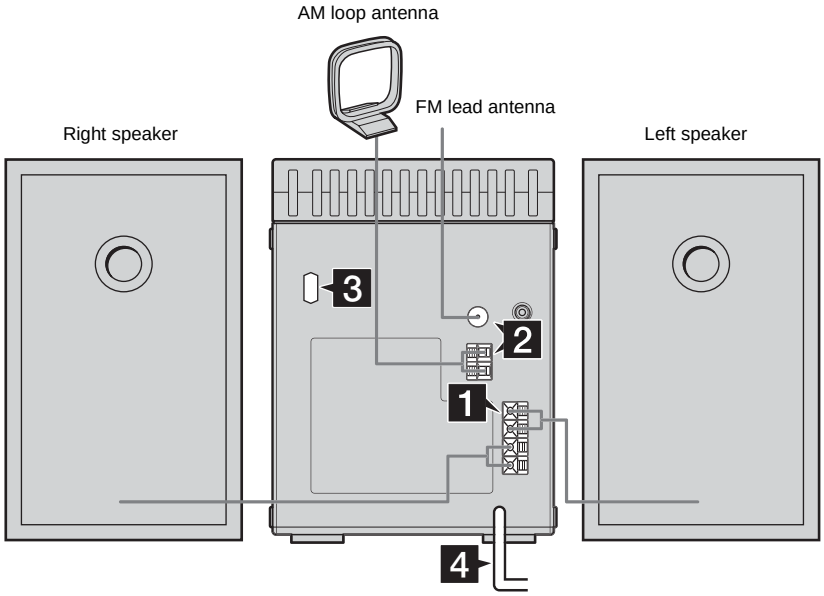
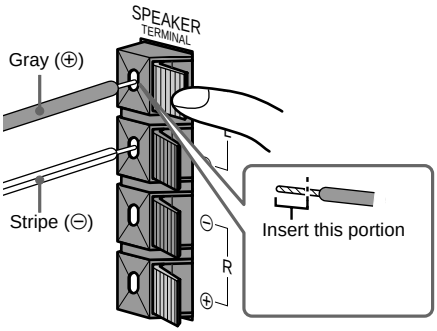
Hooking up the system

Perform the following procedures **1** to **4** to hook up your system using the supplied cords and accessories.



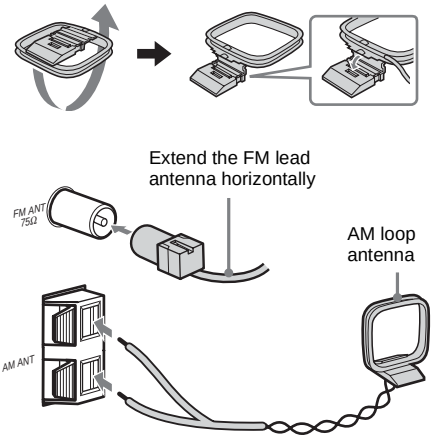
1 **Connect the speakers.**

Connect the right and left speaker cords to the SPEAKER terminals as shown below.



2 **Connect the FM and AM antennas.**

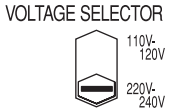
Set up the AM loop antenna, then connect it.



Note

Keep the antennas away from the speaker cords.

3 For models with a voltage selector, set VOLTAGE SELECTOR to the local power line voltage.

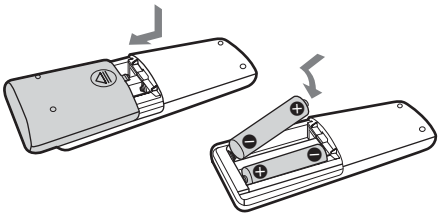


4 Connect the power cord to a wall outlet.

If the plug does not fit the wall socket, detach the supplied plug adaptor (only for models equipped with an adaptor).

To turn on the system, press **I/⏻**.

Inserting two R6 (size AA) batteries into the remote



Note

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Tip

When the remote no longer operates the system, replace both batteries with new ones.

Setting the clock

1 Press I/⏻ to turn on the system.

2 Press CLOCK/TIMER SET.

3 Press I◀◀ /▶▶I repeatedly to set the hour.

4 Press CLOCK/TIMER SET.

5 Press I◀◀ /▶▶I repeatedly to set the minute.

6 Press CLOCK/TIMER SET.

The clock starts working.

To adjust the clock

1 Press CLOCK/TIMER SET.

2 Press I◀◀ /▶▶I to select “CLOCK”, then press CLOCK/TIMER SET.

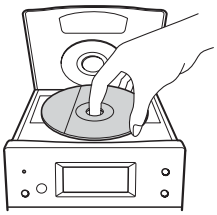
3 Do the same procedures as step 3 to 6 above.

CD – Play

Loading a disc

1 Press ⏏ PUSH OPEN/CLOSE on the unit.

2 Place a disc with the label side up on the CD compartment.



3 Press ⏏ PUSH OPEN/CLOSE on the unit again to close the lid of the CD compartment.

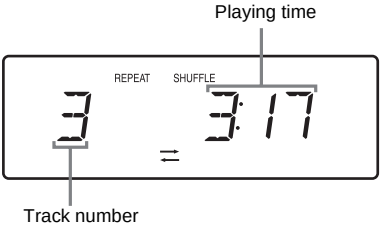
Note

Do not use a disc with tape, seals or paste on it as this may cause malfunction.

Playing a disc

— Normal Play/Shuffle Play

This system lets you play the disc in different play modes.



1 Press CD ► to switch the function to CD.

2 Press PLAY MODE/DIRECTION in stop mode repeatedly until the mode you want appears in the display.

Select	To play
No display (Normal Play)	The tracks on the disc in original order.
SHUFFLE (Shuffle Play)	All tracks on the disc in random order.
PGM (Program Play)	The tracks on the disc in the order you want them to be played (see “Creating your own program” on page 7).

3 Press CD ►.

Note

You cannot change the play mode during playback.

Other operations

To	Do this
Stop play	Press ■.
Pause	Press ❚❚. Press again to resume play.
Select a track	Press ⏮/⏭ repeatedly.
Find a point in a track (Search)	Keep pressing ◀◀/▶▶ during playback and release it at the desired point.
Remove a disc	Press ⏏ PUSH OPEN/CLOSE on the unit.

Playing repeatedly

— Repeat Play

You can play all the tracks or a single track on a disc.

Press REPEAT/FM MODE during playback until "REPEAT" or "REPEAT 1" appears.

REPEAT: For all the tracks on the disc up to five times.
REPEAT 1: For a single track only.

To cancel Repeat Play

Press REPEAT/FM MODE repeatedly until both "REPEAT" and "REPEAT 1" disappear.

Creating your own program

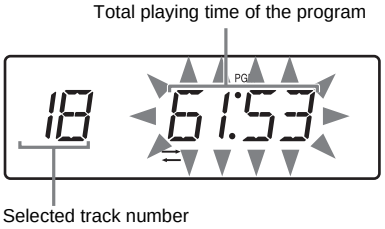
— Program Play

You can make a program of up to 30 steps. You can synchro record the programed tracks onto a cassette tape (page 12).

1 **Press CD ► to switch the function to CD, then press ■.**

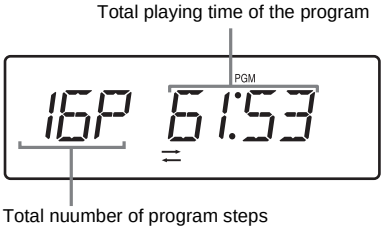
2 **Press PLAY MODE/DIRECTION in stop mode repeatedly until "PGM" appears.**

3 **Press I◄◄ /►►I repeatedly until the desired track number appears.**



4 **Press PLAY MODE/DIRECTION.**

The track is programed.
The total number of program steps appears.



5 **To program additional tracks, repeat steps 3 and 4.**

6 **Press CD ►.**

Program Play starts.

continued

Other operations

To	Do this
Cancel Program Play	Press PLAY MODE/ DIRECTION in stop mode repeatedly until both “PGM” and “SHUFFLE” disappear.
Add a track to the end of the program	Perform steps 1 – 4 in stop mode.
Erase the program	Press CLEAR in stop mode. Each time you press the button, a track is cleared from the end of the program.

Tip

The program you made remains after Program Play finishes. To play the same program again, press CD ►. However, the program is cleared when you open the lid of the CD compartment.

Tuner

Presetting radio stations

You can preset up to 32 stations for FM and AM. You can then tune in any of those stations simply by selecting the corresponding preset number.

Automatic tuning preset

You can automatically tune in all of the stations that can be received in your area and then store the radio frequency of the desired stations.

1 **Press TUNER BAND repeatedly to select FM or AM.**

2 **Press and hold TUNING +/– until the frequency indication starts to change, then release it.**

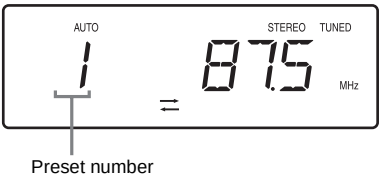
Scanning stops automatically when a station is tuned in. At that time, “TUNED” and “STEREO” (for stereo program only) appear.

If “TUNED” does not appear and the scanning does not stop

Set the frequency of the desired radio station as described in steps 2 through 4 of “Manual tuning preset” (page 9).

3 **Press TUNER MEMORY.**

The preset number appears. Station storage starts with preset number 1. If preset stations have been erased, then stations are stored to the lowest preset number containing no station.



4 **Repeat steps 1 through 3 to preset other stations.**

Manual tuning preset

You can manually tune in and store the radio frequency of the desired stations.

1 Press TUNER BAND repeatedly to select FM or AM.

2 Press TUNING +/– repeatedly to tune in the desired station.

3 Press TUNER MEMORY.

The preset number appears. Station storage starts with preset number 1. If preset stations have been erased, then stations are stored to the lowest preset number containing no station.

4 Repeat steps 1 through 3 to preset other stations.

Other Operations

To	Do this
Tune in a station with a weak signal	Follow the procedure described in "Manual tuning preset" (page 9).
Erase a preset station	Select the preset number of the station to be erased, and then press CLEAR twice.

To change the AM tuning interval (except for European and Middle Eastern models)

The AM tuning interval is factory-preset to 9 kHz (or 10 kHz for some areas). To change the AM tuning interval, tune in any AM station first. While holding TUNER BAND, press **I**/⏻. When you change the interval, all the AM/FM preset stations are erased. To reset the interval, tune in any AM station first. While holding TUNER BAND, press **I**/⏻.

Tips

- The preset stations are retained for half a day even if you disconnect the power cord or if a power failure occurs.
- To improve the reception, adjust the supplied antennas or connect an external antenna.

Listening to the radio

You can listen to a radio station either by selecting a preset station, or by manually tuning in the station.

Listening to a preset station

— Preset Tuning

Preset radio stations in the tuner's memory first (see "Presetting radio stations" on page 8).

1 Press TUNER BAND.

2 Press PRESET +/– repeatedly to select the desired preset station (or RDS station name*).

* European model only

Listening to non-preset radio station

— Manual Tuning

1 Press TUNER BAND repeatedly to select FM or AM.

2 Press TUNING +/– repeatedly to tune in the desired station.

Tips

- To improve broadcast reception, adjust the supplied antennas, or connect a commercially available external antenna.
- When an FM stereo program has static noise, press REPEAT/FM MODE until "MONO" appears. There will be no stereo effect, but the reception will improve.
- In step 2, press and hold TUNING +/– until the frequency indication starts to change. Scanning stops when the system tunes in a station (Automatic Tuning).
- To record the radio programs, use manual recording (page 12).
- You can change the display into the clock display (for the six seconds) by pressing DISPLAY.

Using the Radio Data System (RDS)

(European model only)

What is the Radio Data System?

Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular program signal. RDS is available only on FM stations.*

Note

RDS may not work properly if the station you are tuned in is not transmitting the RDS signal properly or if the signal is weak.

* Not all FM stations provide RDS service, nor do they provide the same types of services. If you are not familiar with the RDS system, check with your local radio stations for details on RDS services in your area.

Receiving RDS broadcasts

Simply select a station from the FM band.

When you tune in a station that provides RDS services, the station name appears in the display.

To check the RDS information

Each time you press DISPLAY, the display changes cyclically as follows:

Station name* → Frequency → Clock display

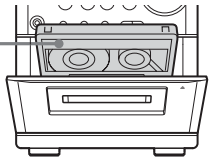
* If the RDS broadcast is not properly received, the station name may not appear in the display.

Loading a tape

1 **Press ⏏ PUSH OPEN/CLOSE on the unit.**

2 **Load a recorded/recordable tape into the cassette holder.**

With the side you want to play/record facing forward.



Playing a tape

You can use TYPE I (normal) tape.

1 **Load a recorded tape.**

2 **Press TAPE ◄►.**

Press TAPE ◄► again to play the reverse side.

3 **Press PLAY MODE/DIRECTION repeatedly to select "⇄" to play one side, "↻" to play both sides, or "↻"* to play both sides repeatedly.**

* The tape automatically stops after playing back five times.

Other operations

To	Do this
Stop play	Press ■.
Pause	Press ❚❚. Press again to resume play.
Fast-forward or rewind	Press ◄◄/►►.
Remove a tape	Press ⏏ PUSH OPEN/CLOSE on the unit.

Tape – Recording

Recording your favorite CD tracks on a tape

— CD Synchro Recording

You can record a whole CD on a tape.
You can use TYPE I (normal) tape.

1 Load a recordable tape.

2 Load a CD you want to record.

3 Press CD SYNC on the unit.

The tape deck stands by for recording and the CD player pauses for playback.
When you want to record on the reverse side, press TAPE ◄►.

4 Press PLAY MODE/DIRECTION repeatedly to select "⇄" to record on one side or "⇄" to record on both sides.

5 Press ●REC PAUSE/START on the unit.

Recording starts.
When the recording is completed, the CD player and the tape deck stop automatically.

To stop recording

Press ■.

To record only your favorite CD tracks

You can record only your favorite CD tracks using Program Play. Between steps 2 and 3, perform steps 1 to 5 of "Creating your own program" (page 7).

Note

When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.

Recording on a tape manually

— Manual Recording

You can record just the portions you like from a CD on a tape. You can also record a radio program.
You can use TYPE I (normal) tape.

1 Load a recordable tape.

2 Select the desired source to record.

- CD: To record from this system's CD player.
- TUNER: To record from this system's tuner.
- MD: To record from the optional component connected to the MD IN jacks.

3 Press ●REC PAUSE/START on the unit.

The tape deck stands by for recording.
When you want to record on the reverse side, press TAPE ◄►.

4 Press PLAY MODE/DIRECTION repeatedly to select "⇄" to record on one side or "⇄" to record on both sides.

5 Press ●REC PAUSE/START on the unit, then start playing the desired source to record.

Recording starts.

Other operations

To	Do this
Stop recording	Press ■.
Pause recording	Press ●REC PAUSE/START on the unit.

Tip

For recording from a CD, you can press ⏮/⏭ to select tracks during recording pause mode (after step 3 and before step 5).

Note

When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.

Sound Adjustment

Adjusting the sound

You can adjust the bass and treble to enjoy more powerful sound.

Generating a more dynamic sound (Dynamic Sound Generator)

Press DSG.

To cancel the DSG, press DSG again.

Adjusting the bass and treble

Using buttons on the remote

Press BASS +/– repeatedly to adjust the bass, or TREBLE +/– repeatedly to adjust the treble.

Using buttons on the unit

1 **Press BASS/TREBLE repeatedly to select “BASS” or “TREBLE”.**

Each time you press the button, the display changes cyclically as follows:

BASS → TREBLE → Original display

2 **Press I◄◄ / ►►I repeatedly to adjust the level while “BASS” or “TREBLE” appears.**

Timer

Falling asleep to music

— Sleep Timer

You can set the system to turn off after a certain time, so that you can fall asleep to music.

Press SLEEP repeatedly.

Each time you press the button, the minute display (the turn-off time) changes cyclically as follows:

AUTO* → 90 → 80 → … → 10 → OFF

* The system automatically turns off in 100 minutes or after the current CD or tape finishes playing.

Other operations

To	Press
Check the remaining time**	SLEEP once.
Change the time to turn off	SLEEP repeatedly to select the time you want.
Cancel the Sleep Timer function	SLEEP repeatedly until “OFF” appears.

**You cannot check the remaining time if you select “AUTO”.

Note

Do not set to “AUTO” during Synchro Recording on a tape.

Tip

You can use the Sleep Timer, even if you have not set the clock.

Waking up to music

— Daily Timer

You can wake up to music at a preset time. Make sure you have set the clock (see "Setting the clock" on page 5).

1 Prepare the sound source you want to play.

- CD: Load a disc. To start from a specific track, make a program (see "Creating your own program" on page 7).
- TAPE: Load a tape.
- TUNER: Tune in a radio station (see "Listening to the radio" on page 9).

2 Press CLOCK/TIMER SET.

3 Press I◄◄ /►►I repeatedly until "PLAY" appears, then press CLOCK/TIMER SET.

"ON TIME" appears and the hour indication flashes.

4 Set the time to start playback.

Press I◄◄ /►►I repeatedly to set the hour, then press CLOCK/TIMER SET.

The minute indication flashes.

Press I◄◄ /►►I repeatedly to set the minute, then press CLOCK/TIMER SET.

5 Set the time to stop playback following the same procedure as step 4.

6 Press I◄◄ /►►I repeatedly depending on the sound source you want to play.

Each time you press the button, the display changes cyclically as follows:

CD → TAPE → TUNER

7 Press VOL +/– repeatedly (or turn VOLUME on the unit) to adjust the volume.

8 Press I/⏻ to turn off the system.

Other operations

To	Do this
Check or change the setting	Turn on the system and then start over from step 1 when the ◴ DAILY indicator appears.
Activate the timer	Press CLOCK/TIMER SELECT repeatedly until "PLAY" appears, then press CLOCK/TIMER SET.
Cancel the timer	Press CLOCK/TIMER SELECT repeatedly until "OFF" appears, then press CLOCK/TIMER SET.

Notes

- If you use the Daily Timer and the Sleep Timer at the same time, the Sleep Timer has priority.
- Do not operate the system from the time the system turns on until the play starts (about 15 seconds before the preset time).
- If the system is on about 15 seconds before the preset time, the Daily Timer will not be activated.
- You cannot use the optional component connected to MD IN jacks as sound sources for the Daily Timer.

Timer recording radio programs

To timer record, you must first preset the radio station (see "Presetting radio stations" on page 8) and set the clock (see "Setting the clock" on page 5).

1 Tune in the preset radio station (see "Listening to a preset station" on page 9).

2 Press CLOCK/TIMER SET.

3 Press I◄◄ /►►I repeatedly until "REC" appears, then press CLOCK/TIMER SET.

"ON TIME" appears and the hour indication flashes.

4 Set the time to start recording.

Press I◄◄ /►►I repeatedly to set the hour, then press CLOCK/TIMER SET.

The minute indication flashes.

Press I◄◄ /►►I repeatedly to set the minute, then press CLOCK/TIMER SET.

5 Set the time to stop recording following the same procedure as step 4.

The ◴ REC indicator lights up.

6 Press VOL +/– repeatedly (or turn VOLUME on the unit) to adjust the volume* for listening to the radio when it is activated by the timer.

* This is not affect the recording volume: it only adjusts the volume for when the radio turns on at the preset time.

7 Load a recordable tape.

8 Press ●REC PAUSE/START on the unit.

9 Press TAPE ◄►, if you want to switch the direction.

10 Press PLAY MODE/DIRECTION repeatedly to select "⇄" to record on one side or "↻" to record on both sides.

11 Press I/⏻ to turn off the system.

Other operations

To	Do this
Check or change the setting	Turn on the system and then start over from step 1 when the ◴ REC indicator appears.
Activate the timer	Press CLOCK/TIMER SELECT repeatedly until "REC" appears, then press CLOCK/TIMER SET.
Cancel the timer	Press CLOCK/TIMER SELECT repeatedly until "OFF" appears, then press CLOCK/TIMER SET.

Notes

- You cannot activate the Daily Timer and recording timer at the same time.
- If you use the recording timer and the Sleep Timer at the same time, the Sleep Timer has priority.
- Do not operate the system from the time the system turns on until the recording starts (about 15 seconds before the preset time).
- If the system is on about 15 seconds before the preset time, the timer recording will not be activated.
- The volume is reduced to minimum during recording.
- If the system is in the recording or recording pause mode at the preset time, the timer recording will not be made.
- If the system is playing back a tape at the preset time, the system will switch to the timer, but the timer recording will not be made.

Display

Turning off the display

— Power Saving Mode

The clock display can be turned off to minimize the amount of power consumed during standby (Power Saving Mode).

Press DISPLAY.

To cancel Power Saving Mode

Press DISPLAY.

Tips

- The STANDBY indicator lights up even in the Power Saving Mode.
- The timer continues to operate in Power Saving Mode.

Viewing information about the disc in the display

You can check the playing time and remaining time of the current track or that of the disc.

Checking the remaining time (CD)

Press DISPLAY repeatedly.

Each time you press the button, the display changes cyclically as follows:

During playback

Elapsed playing time on the current track[*1] → Remaining time on the current track[*2] → Remaining time on the current disc → Clock display (for six seconds)

[*1]"– –:– –" appears when the total playing time of the program exceeds 100 minutes, when the program contains 31 tracks or more, or when a disc with 31 tracks or more is played in Shuffle Play mode.

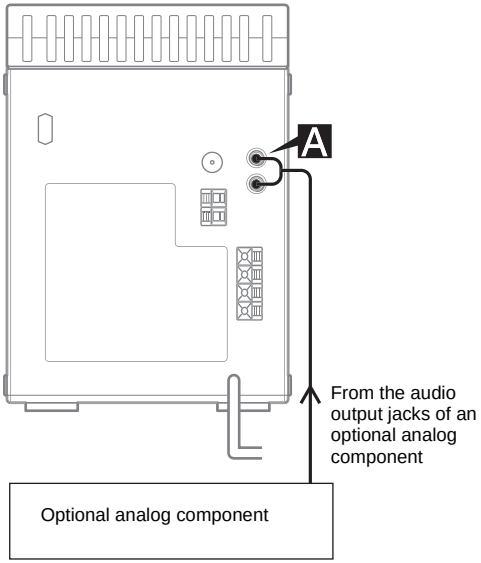
[*2]"– –:– –" appears when a track is played whose number is 31 or over.

In the stop mode

Total number of tracks and total playing time → Clock display (for six seconds)

Hooking up optional components

To enhance your system, you can connect optional components. Refer to the operating instructions provided with each component.



A MD IN jacks

Use audio cords (not supplied) to connect an optional analog component (MD deck, etc.) to these jacks. You can then listen to the sound from the component.

Listening to audio from a connected component

1 Connect audio cords.
See “Hooking up optional components” on page 17.

2 Press MD.
Start playing the connected component.

Recording audio from a connected component

1 Connect audio cords.

2 Start recording manually.
See “Recording on a tape manually” on page 12.

Troubleshooting

Problems and remedies

Should you encounter a problem with your system, do the following:

1 Make sure the power cord and speaker cords are correctly and firmly connected.

2 Find your problem in the troubleshooting checklist below and take the indicated corrective action.

If the problem persists after doing all of the above, consult your nearest Sony dealer.

General

The display or button remains lighted or flashes even after the system was turned off.

- Press DISPLAY repeatedly until the clock display appears.

The clock indication does not show the correct time.

- A power interruption has occurred. Set the clock (page 5) and timer settings (pages 14 and 15) again.

The clock setting/radio presetting/timer is canceled.

- The power cord is disconnected or a power failure occurs longer than half a day.
  Redo the following:
  – "Setting the clock" (page 5)
  – "Presetting radio stations" (page 8)
  If you have set the timer, also redo "Waking up to music" (page 14) and "Timer recording radio programs" (page 15).

There is no sound.

- Press VOL + repeatedly (or turn VOLUME on the unit clockwise).
- Make sure the headphones are not connected.
- Insert only the stripped portion of the speaker cord into the SPEAKER terminal. Inserting the vinyl portion of the speaker cord will obstruct the speaker connections (page 4).

Sound comes from one channel, or unbalanced left and right volume.

- Check the speaker connection and speaker placement.

Sound lacks bass.

- Check that the speaker's + and – terminals are connected correctly.

There is severe hum or noise.

- A TV or VCR is placed too close to the stereo system. Move the stereo system away from the TV or VCR.
- Connect the system to a different wall outlet.
- Install a noise filter (commercially available) to the power line.

The timer cannot be set.

- Set the clock correctly (page 5).

The timer does not function.

- Check the timer setting and set the correct time (pages 14 and 15).
- Cancel the Sleep Timer function (page 13).
- You cannot activate the timer recording and Daily Timer at the same time.

The remote does not function.

- Remove the obstacle.
- Move the remote closer to the system.
- Point the remote at the system's sensor.
- Replace the batteries (R6/size AA).

The color irregularity on a TV screen persists.

- Turn off the TV set once, then turn it on after 15 to 30 minutes. If the color irregularity still persists, place the speakers farther away from the TV set.

CD player

The CD compartment does not close.

- Place the disc correctly.

The sound drops out.

- The lens is dirty. Clean it with a commercially available blower.

Play does not start.

- Open the lid of the CD compartment and check whether a disc is loaded.
- Wipe the disc clean (page 21).
- Replace the disc.
- Place the disc that this system can play.
- Place the disc correctly.
- Place the disc in the tray with the label side up.
- Remove the disc and wipe away the moisture on the disc, then leave the system turned on for about an hour until the moisture evaporates.
- Press CD ► to start play.

The sound skips.

- Wipe the disc clean (page 21).
- Replace the disc.
- Try moving the system to a place without vibration (e.g., on top of a stable stand).
- Try moving the speakers away from the system, or placing them on separate stands. When you listen to a track with bass sounds at high volume, the speaker vibration may cause the sound to skip.

Play does not start from the first track.

- Press PLAY MODE/DIRECTION repeatedly until both "PGM" and "SHUFFLE" disappear to return to Normal Play.

Tuner

Severe hum or noise/stations cannot be received.

- Set the proper band and frequency (page 9).
- Connect the antenna properly (page 4).
- Find a place and an orientation that provide good reception, then set up the antenna again. If you cannot obtain good reception, we recommend you connect a commercially available external antenna.
- The supplied FM lead antenna receives signals along its entire length, so make sure you extend it fully.
- Locate the antennas as far away from the speaker cords as possible.
- Consult your nearest Sony dealer if the supplied AM antenna has come off the plastic stand.
- Try turning off surrounding electrical equipment.

A stereo FM program cannot be received in stereo.

- Press REPEAT/FM MODE until "STEREO" appears in the display.

Tape deck

The tape does not record or play, or there is a decrease in sound level.

- The heads are dirty. Clean them (page 21).
- The record/playback heads are magnetised. Demagnetise them (page 22).

The tape does not erase completely.

- The record/playback heads are magnetised. Demagnetise them (page 22).

There is excessive wow or flutter, or the sound drops out.

- The capstans in the tape deck are dirty. Clean them using a cleaning cassette (page 21).

Noise increases or the high frequencies are erased.

- The record/playback heads are magnetised. Demagnetise them (page 22).

The tape does not record.

- No cassette is loaded. Load a cassette.
- The tab has been removed from the cassette. Cover the broken tab with adhesive tape (page 21).
- The tape has wound to the end.

Optional components

There is no sound.

- Refer to General item "There is no sound." (page 18) and check the condition of the system.
- Connect the component properly (page 17) while checking:
  – if the cords are connected properly.
  – if the cord plugs are firmly inserted all the way.
- Turn on the connected component.
- Refer to the operating instructions supplied with the connected component and start playing.
- Press MD (page 17).

The sound is distorted.

- Set the volume of the connected component lower.

If the system still does not operate properly after performing the above measures, reset the system as follows:

1 Turn off the system.

2 While pressing and holding ■, turn on the system.

The system is reset to the factory settings. You should set the settings you made, such as the preset stations, clock, and timer.

Messages

One of the following messages may appear or flash in the display during operation.

CD

NO DISC

There is no disc in the CD compartment.

Additional Information

Precautions

On operating voltage

Before operating the system, check that the operating voltage of your system is identical with the voltage of your local power supply.

On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the system from the wall outlet (mains) if it is not to be used for an extended period of time. To disconnect the power cord (mains lead), pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the system, unplug the system and have it checked by qualified personnel before operating it any further.
- AC power cord must be changed only at the qualified service shop.

On placement

- Do not place the system in an inclined position.
- Do not place the system in locations where it is;
  - Extremely hot or cold
  - Dusty or dirty
  - Very humid
  - Subject to vibrations
  - Subject to direct sunlight.
- Use caution when placing the unit or speakers on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

On heat buildup

- Although the system heats up during operation, this is not a malfunction.
- Place the system in a location with adequate ventilation to prevent heat build-up in the system.
- If you continuously use this system at a high volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.
- To prevent a malfunction, do not cover the ventilation hole.

In case color irregularity is observed on nearby a TV screen

With the magnetically shielded type of speaker system, the speakers can be installed near a TV set. However, color irregularity may still be observed on the TV screen depending on the type of your TV set.

If color irregularity is observed...

Turn off the TV set once, then turn it on after 15 to 30 minutes.

If color irregularity is observed again...

Place the speakers farther away from the TV set.

On operation

- If the system is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD player. Should this occur, the system will not operate properly. Remove the disc and leave the system turned on for about an hour until the moisture evaporates.
- When you move the system, take out any disc.

If you have any questions or problems concerning your system, please consult your nearest Sony dealer.

Notes on discs

- Before playing, clean the disc with a cleaning cloth. Wipe the disc from the center out.
- Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for vinyl LPs.
- Do not expose the disc to direct sunlight or heat sources such as hot air ducts, nor leave it in a car parked in direct sunlight.
- Do not use discs encircled with a protection ring. This may cause a malfunction to the system.
- When using discs that have glue or similar tacky substance on the label side of the disc or that used a special ink when the label was printed, there is a chance that the disc or label may become attached to parts inside this unit. When this occurs, it may not be possible to remove the disc, and may also cause this unit to malfunction. Be sure to check that the label side of the disc is not sticky before using.
  The following types of disc should not be used:
  – Rental or used discs with attached seals where the glue extends beyond the seal. The perimeter of the seal on the disc is tacky.
  – Discs that have labels printed using a special ink that feels tacky when touched.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such discs.

Note on CD-R/CD-RW playback

Discs recorded on CD-R/CD-RW drives may not be played back because of scratches, dirt, recording condition or the drive's characteristics. Besides, the discs, which are not yet finalized at the end of recording, cannot be played back.

Music discs encoded with copyright protection technologies

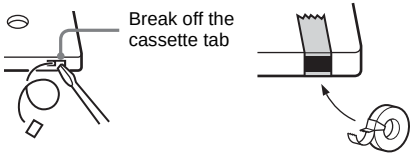
This product is designed to playback discs that conform to the Compact Disc (CD) standard. Recently, various music discs encoded with copyright protection technologies are marketed by some record companies. Please be aware that among those discs, there are some that do not conform to the CD standard and may not be playable by this product.

Cleaning the cabinet

Clean the cabinet, panel and controls with a soft cloth slightly moistened with mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as thinner, benzene or alcohol.

To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the cassette tab from side A or B as illustrated.



If you later want to reuse the tape for recording, cover the broken tab with adhesive tape.

Before placing a cassette in the tape deck

Take up any slack in the tape. Otherwise, the tape may get entangled in the parts of the tape deck and become damaged.

When using a tape longer than 90 minutes

The tape is very elastic. Do not change the tape operations such as play, stop, and fast-winding frequently. The tape may get entangled in the tape deck.

Cleaning the tape heads

Clean the tape heads after every 10 hours of use.

Be sure to clean the tape heads before you start an important recording or after playing an old tape.

Use a separately sold dry-type or wet-type cleaning cassette. For details, refer to the instructions of the cleaning cassette.

continued

Demagnetising the tape heads

Demagnetise the tape heads and the metal parts that have contact with the tape after every 20 to 30 hours of use with a separately sold demagnetising cassette. For details, refer to the instructions of the demagnetising cassette.

Specifications

Main unit

Amplifier section

AUDIO POWER SPECIFICATIONS: (U.S.A. model only)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION:
With 6-ohm loads, both channels driven, from 120 - 10,000 Hz; rated 14 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.
North American model:
Continuous RMS power output (reference): 15 + 15 W (6 ohms at 1 kHz, 10% THD)
European model:
DIN power output (rated): 11 + 11 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 15 + 15 W (6 ohms at 1 kHz, 10% THD)
Music power output (reference): 25 + 25 W
Other models:
The following measured at AC 230 V or AC 120 V, 50/60 Hz
DIN power output (rated): 11 + 11 W (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference): 15 + 15 W (6 ohms at 1 kHz, 10% THD)

Inputs
MD IN (phono jacks): Sensitivity 800 mV, impedance 47 kilohms

Outputs
PHONES (stereo minijack): Accepts headphones with an impedance of 8 ohms or more
SPEAKER: Accepts impedance of 6 to 16 ohms.

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 nm) Emission duration: continuous
Frequency response	2 Hz – 20 kHz (±0.5 dB)

Tape deck section

Recording system	4-track 2-channel stereo
Frequency response	50 – 13,000 Hz (±3 dB), using Sony TYPE I cassettes
Wow and flutter	±0.15% W. Peak (IEC) 0.1% W. RMS (NAB) ±0.2% W. Peak (DIN)

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz (50-kHz step)
Antenna	FM lead antenna
Antenna terminals	75 ohms balanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
Pan-American model:	530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,710 kHz (with the tuning interval set at 9 kHz)
European model:	531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Other models:	530 – 1,710 kHz (with the tuning interval set at 10 kHz) 531 – 1,602 kHz (with the tuning interval set at 9 kHz)
Antenna	AM loop antenna, external antenna terminal
Intermediate frequency	450 kHz

Speaker

Speaker system	
(CMT-EP515):	2 way, bass-reflex type
(CMT-EP414):	Bass-reflex type
Speaker units	
Woofer:	10 cm dia., cone type
Tweeter (CMT-EP515 only):	2 cm dia., dome type
Nominal impedance	6 ohms
Dimensions (w/h/d)	Approx. 148 × 230 × 143 mm
Mass	Approx. 1.5 kg net per speaker

General

Power requirements	
North American model:	120 V AC, 60 Hz
European model:	230 V AC, 50/60 Hz
Australian model:	230 – 240 V AC, 50/60 Hz
Korean model:	220 V AC, 60 Hz
Mexican model:	120 V AC, 60 Hz
Other models:	110 – 120 V or 220 – 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption	
North American model:	50 watts
European model:	50 watts 0.3 watts (in the standby mode)
Korean model:	50 watts
Other models:	50 watts
Dimensions (w/h/d)	Approx. 163 × 233 × 237 mm
Mass	Approx. 3.6 kg
Supplied accessories	Remote (1) R6 (size AA) batteries (2) AM loop antenna (1) FM lead antenna (1)

Design and specifications are subject to change without notice.

List of button locations and reference pages

How to use this page

Use this page to find the location of buttons and other parts of the system that are mentioned in the text.

Illustration number

DISPLAY 22 (9, 10, 16)

Name of button/part — Reference page

Main unit

ALPHABETICAL ORDER

A – M

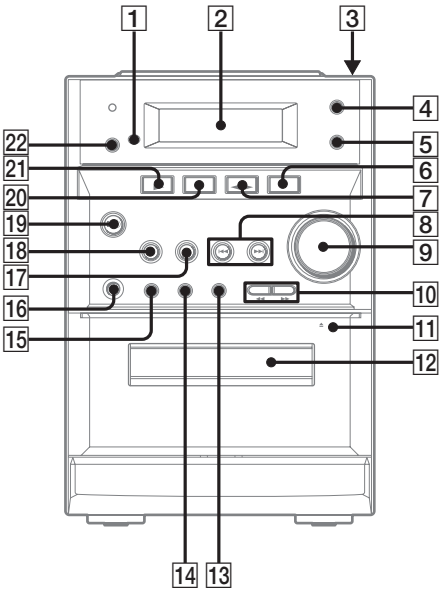
BASS/TREBLE 5 (13)
Cassette compartment 12
CD SYNC 13 (12)
DIRECTION 15 (11, 12, 15)
DISPLAY 22 (9, 10, 16)
Display window 2
DSG 4 (13)
MD 6 (17)

P – Z

PHONES jack 16
PLAY MODE 15 (6, 7)
PRESET +/– 8 (9)
Remote sensor 1
TUNER BAND 20 (8, 9)
TUNING +/– 10 (8, 9)
VOLUME 9 (14, 15)

BUTTON DESCRIPTIONS

I/⏻ (power) 19 (5, 9, 14, 15)
◀◀/▶▶ (fast forward/rewind) 10 (6, 11)
I◀◀ / ▶▶I (go back/go forward) 8 (5, 6, 7, 12, 13, 14, 15)
■ (stop) 17 (6, 7, 11, 12, 19)
II (pause) 18 (6, 11)
●REC PAUSE/START 14 (12, 15)
CD ▶ (play) 21 (6, 7)
TAPE ◀▶ (play) 7 (11, 12, 15)
⏏ PUSH OPEN/CLOSE (CD open/close) 3 (6)
⏏ PUSH OPEN/CLOSE (tape open/close) 11 (11)



ALPHABETICAL ORDER

A – M

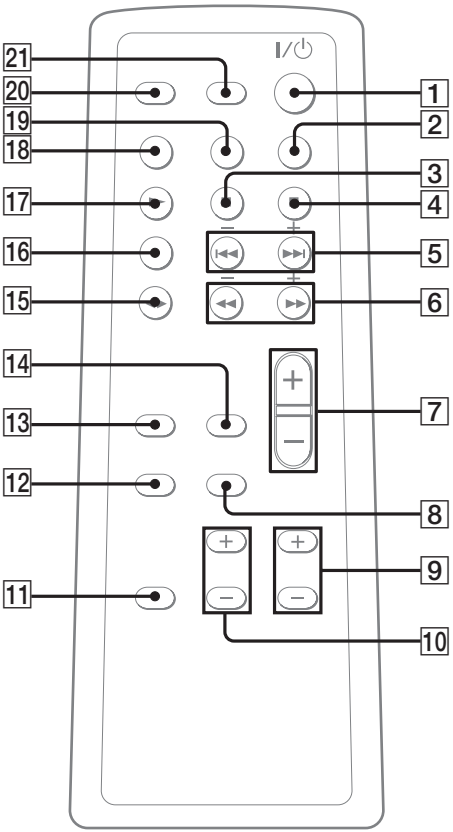
BASS +/– 10 (13)
CLEAR 8 (8, 9)
CLOCK/TIMER SELECT 20 (14, 15)
CLOCK/TIMER SET 21 (5, 14, 15)
DISPLAY 2 (9, 10, 16)
DSG 11 (13)
MD 18 (17)

P – Z

PLAY MODE/DIRECTION 13 (6, 7, 11, 12, 15)
PRESET +/– 5 (9)
REPEAT/FM MODE 14 (7, 9)
SLEEP 19 (13)
TREBLE +/– 9 (13)
TUNER BAND 16 (8, 9)
TUNER MEMORY 12 (8)
TUNING +/– 6 (8, 9)
VOL +/– 7 (14, 15)

BUTTON DESCRIPTIONS

I/⏻ (power) 1 (5, 9, 14, 15)
◀◀/▶▶ (fast forward/rewind) 6 (6, 11)
I◀◀ /▶▶I (go back/go forward) 5 (5, 6, 7, 12, 14, 15)
■ (stop) 4 (6, 7, 11, 12, 19)
II (pause) 3 (6, 11)
CD ► (play) 17 (6, 7)
TAPE ◄► (play) 15 (11, 12, 15)



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